

# Report of Test

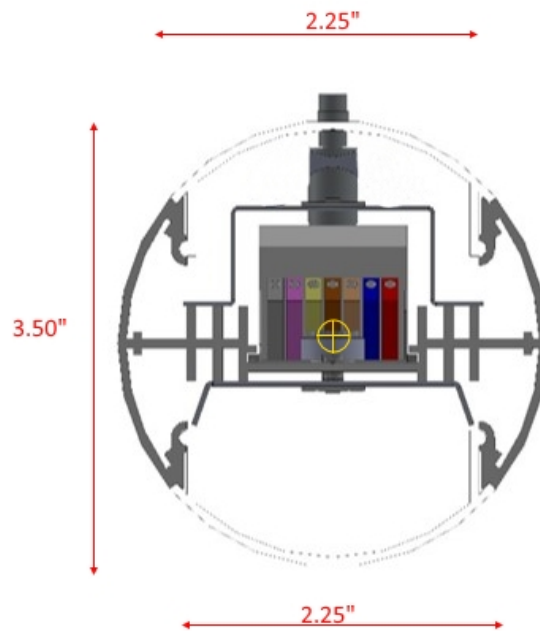
## LLIA000930-010A

Catalog Number: AR300-I/D-HO/HO-K40-80--4-XX-LOH/LOH-XXXX-120

Pendant mounted, extruded aluminum housing, formed white aluminum reflector trays, frosted plastic upper and lower enclosures.

90 white upper LEDs and 96 white lower LEDs.

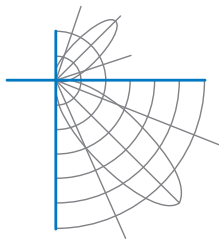
One Osram Optotronic OTi 85/120-277/2A0 DIMLT2 L LED driver  
120.0Vac, 60.00Hz, 0.5002A, 59.57W, 0.993PF, 3.2%THD(i)



### Performance Summary

Total Light Output	7682 lm
Luminaire Power	59.6 W
Luminous Efficacy	128.9 lm/W

**PREPARED FOR : Precision Architectural Lighting, 4830 Timber Creek Drive, Houston, TX 77017**



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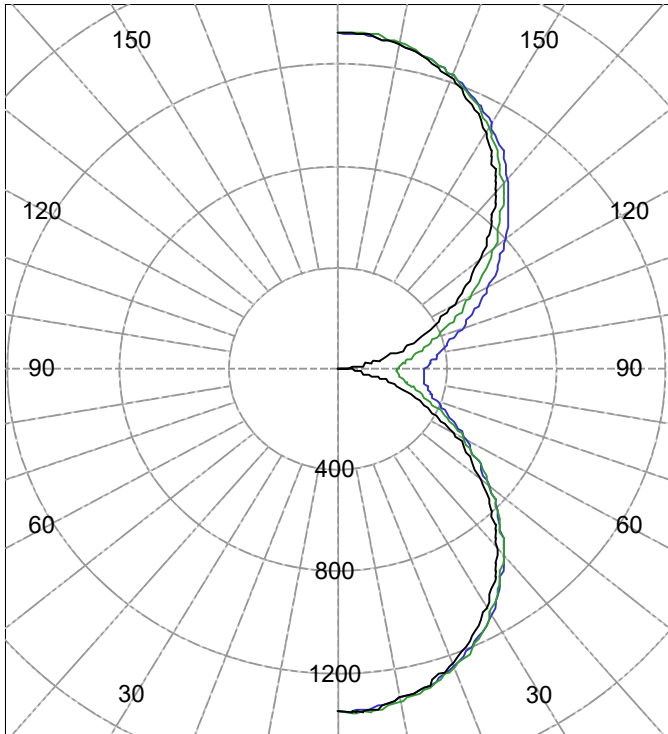
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Legend: C0-Black, C45-Green, C90-Blue (cd)



(Two plane symmetry) C0-C90

**INTENSITY SUMMARY (cd)**

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	1351	1351	1351	1351	1351	
5.0	1345	1338	1350	1347	1338	128
10.0	1319	1316	1330	1329	1319	
15.0	1284	1279	1295	1296	1289	364
20.0	1230	1230	1248	1252	1243	
25.0	1164	1161	1189	1194	1187	543
30.0	1084	1084	1112	1123	1115	
35.0	997	998	1028	1038	1030	637
40.0	897	902	932	941	934	
45.0	793	798	830	836	828	631
50.0	684	693	724	728	721	
55.0	575	589	617	621	617	543
60.0	469	487	517	525	525	
65.0	365	389	425	443	448	414
70.0	269	297	347	379	389	
75.0	177	216	285	333	347	292
80.0	98	151	243	304	323	
85.0	37	108	220	293	315	221
90.0	2	95	220	298	321	

**AVERAGE LUMINANCE (cd / m<sup>2</sup>)**

Gamma	C0	C45	C90
45.0	15964	14456	13719
55.0	14212	12474	11671
65.0	12161	10628	10248
75.0	9469	9725	10434
85.0	5511	12422	14406

**ZONAL FLUX AND PERCENTAGES**

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	1035	N / A	13.5
0-40	1671	N / A	21.8
0-60	2845	N / A	37.0
0-90	3773	N / A	49.1
40-90	2101	N / A	27.4
60-90	928	N / A	12.1
90-180	3909	N / A	50.9
0-180	7682	N / A	100.0

Total Light Output = 7,682 lm

Spacing Criterion: 0-180 1.2  
Spacing Criterion: 90-270 1.2

Signed:

Authorized Signatory

Date of test 24-Jan-2018  
Date of report 25-Jan-2018



**Test Report No. LLIA000930-010A**

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120.0Vac, 60.00Hz, 0.5002A, 59.57W, 0.993PF, 3.2%THD(i)

**Intensity data (cd)**

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	1351	1351	1351	1351	1351
2.5	1348	1345	1357	1352	1343
5.0	1345	1338	1350	1347	1338
7.5	1335	1330	1343	1340	1331
10.0	1319	1316	1330	1329	1319
12.5	1303	1301	1316	1315	1305
15.0	1284	1279	1295	1296	1289
17.5	1260	1257	1275	1276	1268
20.0	1230	1230	1248	1252	1243
22.5	1196	1197	1220	1225	1217
25.0	1164	1161	1189	1194	1187
27.5	1126	1124	1153	1160	1153
30.0	1084	1084	1112	1123	1115
32.5	1040	1043	1072	1082	1075
35.0	997	998	1028	1038	1030
37.5	946	953	983	991	983
40.0	897	902	932	941	934
42.5	843	851	883	889	882
45.0	793	798	830	836	828
47.5	739	747	778	782	774
50.0	684	693	724	728	721
52.5	628	642	671	673	667
55.0	575	589	617	621	617
57.5	520	538	566	571	569
60.0	469	487	517	525	525
62.5	417	437	469	482	484
65.0	365	389	425	443	448
67.5	316	342	384	409	416
70.0	269	297	347	379	389
72.5	221	255	314	354	366
75.0	177	216	285	333	347
77.5	135	181	262	316	333
80.0	98	151	243	304	323
82.5	65	126	229	296	316
85.0	37	108	220	293	315
87.5	15	97	218	293	316
90.0	2	95	220	298	321



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**Intensity data (cd)**

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	2	95	220	298	321
92.5	17	101	227	306	330
95.0	41	114	238	318	343
97.5	71	135	254	333	358
100.0	105	162	275	352	377
102.5	145	193	299	374	400
105.0	186	229	327	399	424
107.5	233	269	358	428	454
110.0	277	312	393	458	484
112.5	325	357	431	492	518
115.0	373	404	471	528	553
117.5	423	452	513	565	591
120.0	474	501	557	604	630
122.5	526	550	604	646	671
125.0	578	600	651	688	712
127.5	629	650	698	731	756
130.0	683	701	746	775	797
132.5	735	751	793	820	841
135.0	788	801	840	864	882
137.5	840	850	886	907	925
140.0	892	898	932	949	965
142.5	941	946	975	991	1005
145.0	987	991	1018	1030	1042
147.5	1031	1033	1056	1069	1079
150.0	1075	1072	1095	1106	1114
152.5	1112	1110	1131	1139	1146
155.0	1149	1145	1165	1170	1173
157.5	1181	1176	1194	1199	1203
160.0	1211	1205	1224	1225	1225
162.5	1236	1231	1247	1248	1248
165.0	1261	1253	1270	1268	1266
167.5	1280	1272	1288	1286	1284
170.0	1296	1288	1303	1301	1296
172.5	1308	1300	1314	1311	1306
175.0	1317	1309	1323	1320	1312
177.5	1322	1313	1329	1324	1317
180.0	1323	1323	1323	1323	1323



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**Coefficients Of Utilization - Zonal Cavity Method**

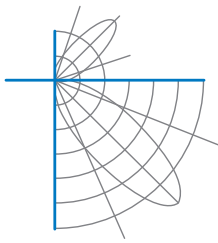
Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	99	99	99	99	83	83	83	68	68	68	55	55	55	49
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	74	68	81	74	68	64	62	58	54	52	48	46	42	39	38	33
3	80	70	63	57	73	65	58	53	55	50	46	45	42	39	37	34	32	28
4	73	62	54	48	67	58	50	45	49	43	39	40	36	33	33	30	27	24
5	67	55	47	41	62	51	44	38	44	38	33	36	32	29	30	26	24	21
6	62	50	41	36	57	46	39	33	39	33	29	33	28	25	27	24	21	18
7	57	45	37	31	53	42	34	29	36	30	26	30	25	22	25	21	19	16
8	53	41	33	27	49	38	31	26	32	27	23	27	23	20	23	19	17	14
9	49	37	30	24	46	35	28	23	30	24	20	25	21	18	21	18	15	13
10	46	34	27	22	43	32	25	21	27	22	18	23	19	16	19	16	14	12

For absolute test reports, CUs are expressed as a percentage of total lumen output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are lambertian reflectors. 2) Incident flux on each surface is uniformly distributed. 3) The room is spectrally neutral. When luminaires are not evenly distributed throughout the room, or do not exhibit lateral symmetry, CU values may differ from actual performance.

**Circle of Light Plot**

Height(ft)	Illuminance at Nadir (fc)	Beam Width (across 50% Nadir Illum)	
		0-180	90-270
6.0	37.5	7.18	7.36
8.0	21.1	9.57	9.81
10.0	13.5	11.96	12.27
12.0	9.4	14.35	14.72
14.0	6.9	16.74	17.17
16.0	5.3	19.14	19.63



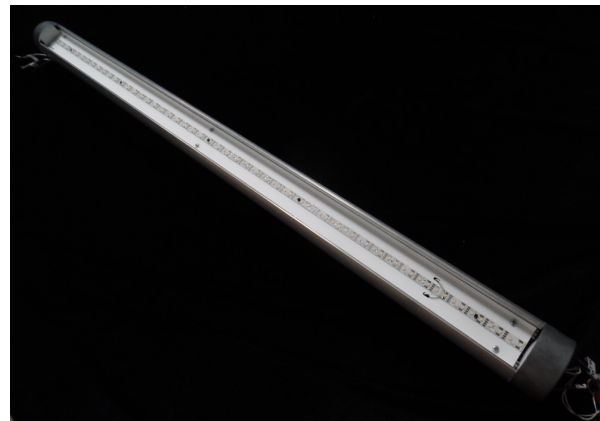
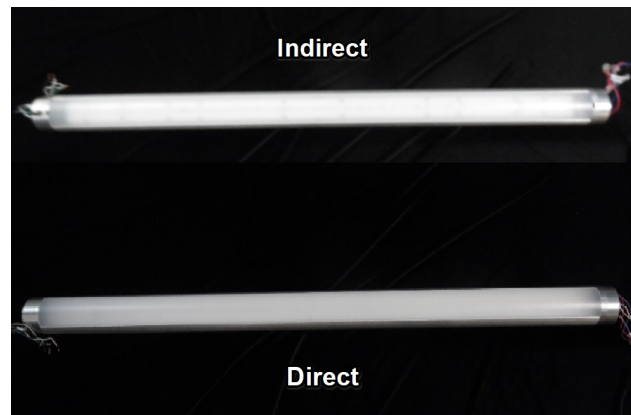
**Test Report No. LLIA000930-010A**

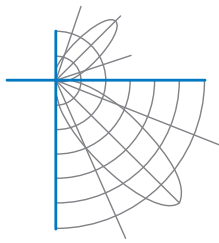
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**Test Distance** 9.5 m  
**Test Temperature** 25.1 °C

### Notes

The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of publications: IES LM-79-08 (Sec. 12), IES LM-16-93, IES LM-58-13, CIE 13.3:1995, CIE 15:2004, ANSI C78.377:2015, ANSI C82.77-10:2014.

The luminous intensity values, and other derived quantities, contained in this report are based on the absolute data, as measured.

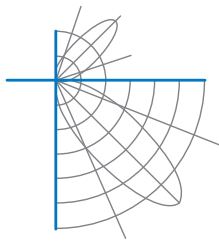
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the CIE Gamma coordinate system as defined in CIE publication number 121.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with \* are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.



## Report of Test

**LLIA000930-010B**

Integrating Sphere Report

Catalog Number: AR300-I/D-HO/HO-K40-80--4-XX-LOH/LOH-XXXX-120  
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### Performance Summary

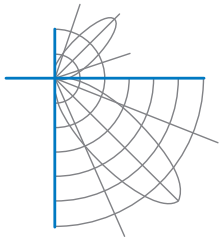
Voltage	120.0 Vac
Current	0.5003 A
Power	59.47 W
Frequency	59.97 Hz
Power Factor	0.991
Current THD	3.3 %

Total Luminous Flux	7713.9 lm
Efficacy	129.7 lm/W
Chromaticity (x,y)	(0.3790, 0.3749)
(u',v')	(0.2249, 0.5006)
Duv	-0.0004
CCT	4027 K
CRI (Ra)	84
R9	18
TM-30: Rf	83
TM-30: Rg	95

Prepared For:  
Precision Architectural Lighting  
4830 Timber Creek Drive  
Houston, TX 77017, USA

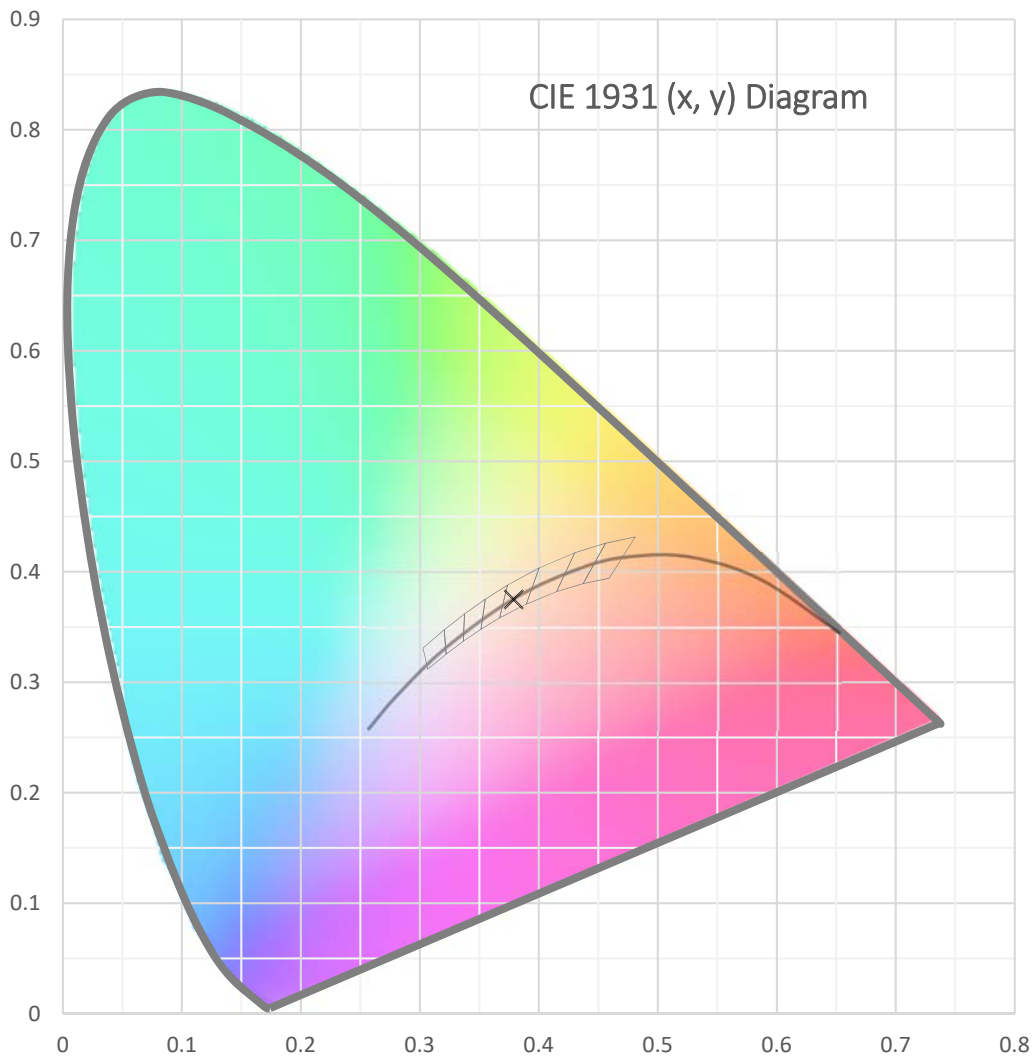
Test date: 01/19/2018  
Report date: 01/24/2018

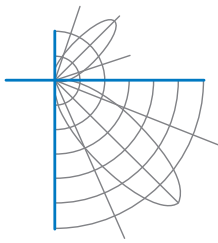




**Test Report Number: LLIA000930-010B**

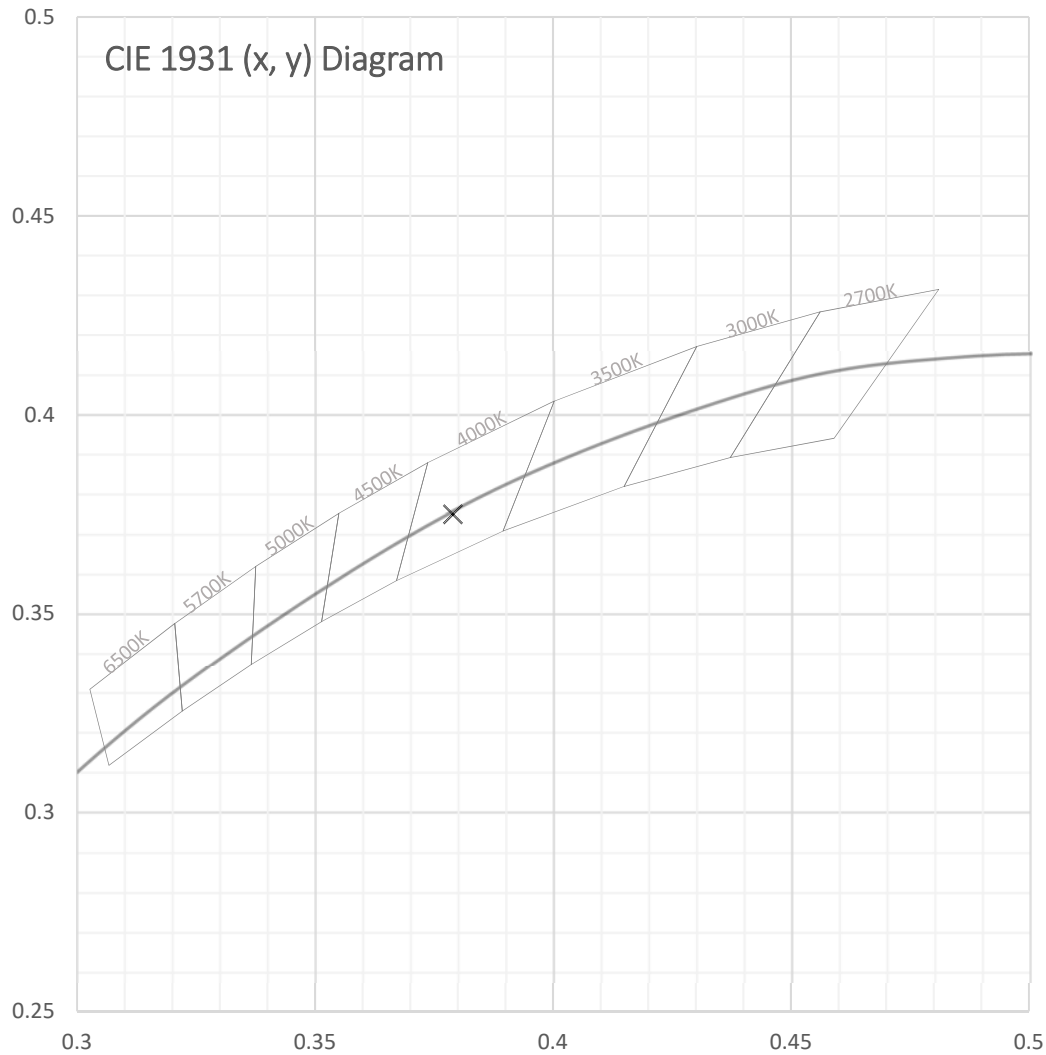
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**Spectral Data**

Total Radiant Flux	24.07 W
Total Luminous Flux	7713.9 Lm
Chromaticity CIE 1931 (x, y)	(0.3790, 0.3749)
Chromaticity CIE 1976 (u', v')	(0.2249, 0.5006)
Correlated Color Temperature (CCT)	4027 K
Color Rendering Index (Ra)	84
R1	83
R2	91
R3	95
R4	82
R5	83
R6	87
R7	87
R8	67
R9	18
R10	78
R11	81
R12	62
R13	85
R14	98
TM-30: Rf	83
TM-30: Rg	95
Distance from Planckian Locus (Duv)	-0.0004
Scotopic/Photopic Ratio *	1.720

**Electrical Data**

Voltage	120.0 Vac
Current	0.5003 A
Power	59.47 W
Frequency	59.97 Hz
Power Factor	0.991
Current THD	3.3 %

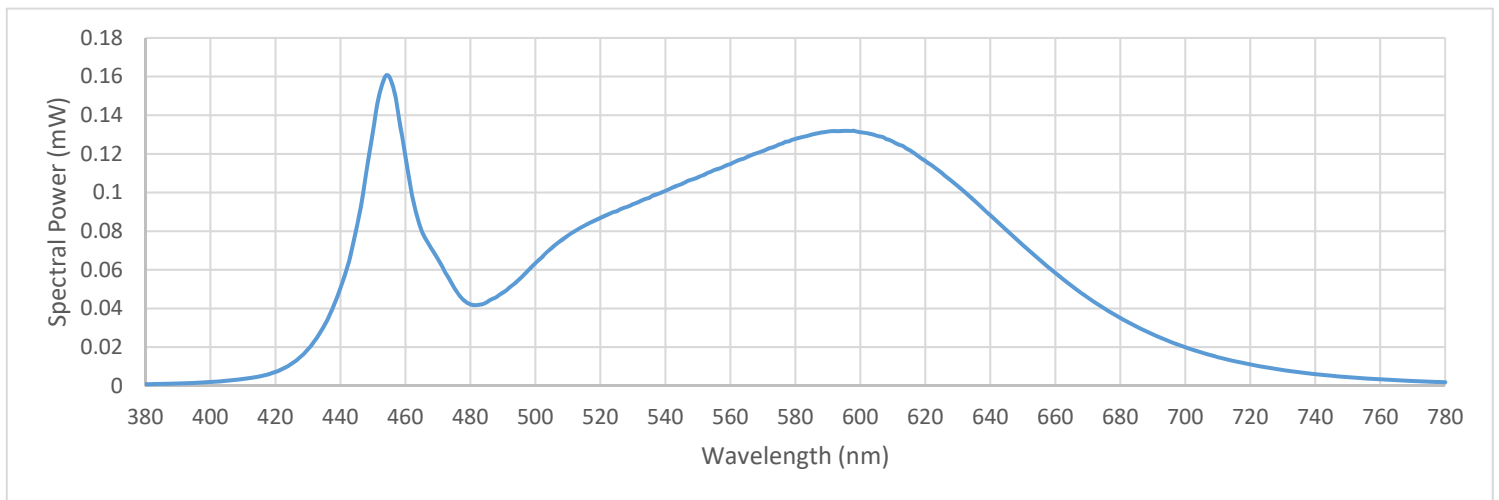


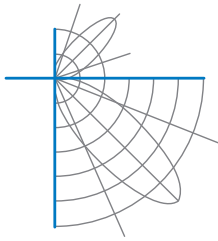
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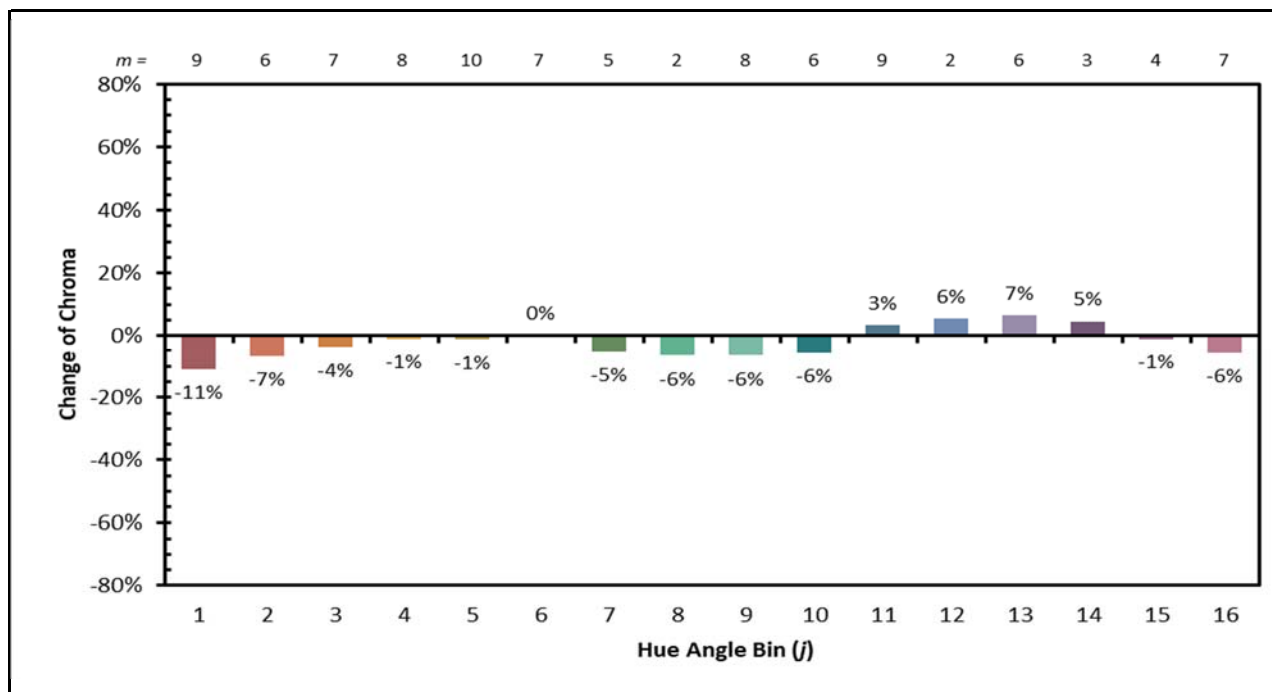
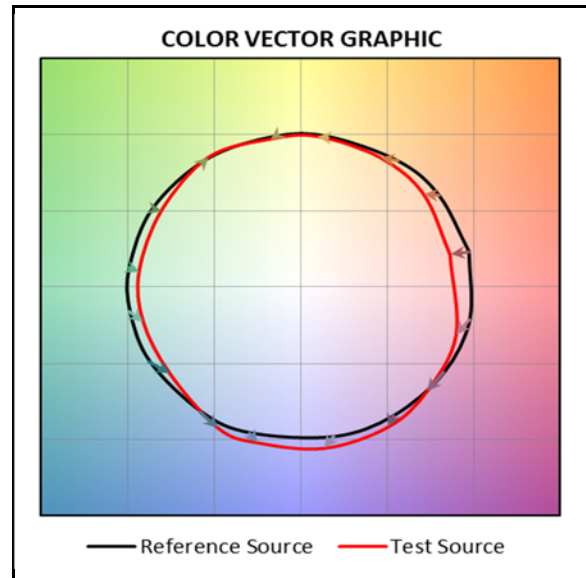
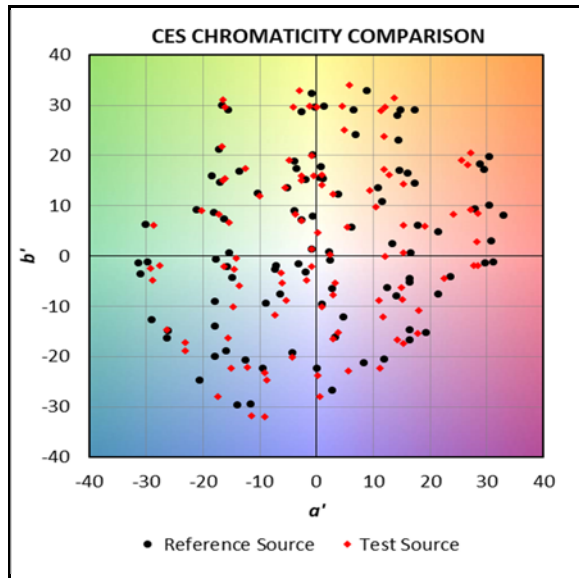
**Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)**

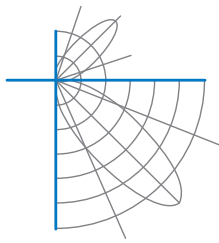
380	0.000849	480	0.042153	580	0.127702	680	0.035115
385	0.000922	485	0.043201	585	0.129896	685	0.030611
390	0.001161	490	0.048213	590	0.131584	690	0.026593
395	0.001469	495	0.054922	595	0.131918	695	0.023061
400	0.001959	500	0.063432	600	0.131277	700	0.019965
405	0.002587	505	0.071202	605	0.129397	705	0.017209
410	0.003496	510	0.077733	610	0.126338	710	0.014798
415	0.004787	515	0.082745	615	0.122018	715	0.012801
420	0.007163	520	0.086840	620	0.116394	720	0.011013
425	0.011339	525	0.090295	625	0.110279	725	0.009467
430	0.018835	530	0.093962	630	0.103229	730	0.008153
435	0.031163	535	0.097257	635	0.096090	735	0.007007
440	0.050507	540	0.100782	640	0.088270	740	0.006012
445	0.081967	545	0.104421	645	0.080503	745	0.005171
450	0.131251	550	0.107854	650	0.072842	750	0.004458
455	0.160020	555	0.111603	655	0.065379	755	0.003841
460	0.118811	560	0.114722	660	0.058407	760	0.003336
465	0.080149	565	0.118275	665	0.051751	765	0.002880
470	0.065709	570	0.121467	670	0.045592	770	0.002489
475	0.050652	575	0.124878	675	0.040084	775	0.002147
						780	0.001853





IES TM-30 Summary





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Test Equipment Configuration: LightLab International Allentown 2m Integrating Sphere  
Measurements acquired using a Labsphere CDS 2600 spectroradiometer  
Testing was performed using 4 $\pi$  geometry

Test Temperature: 25.8 °C

Test Procedure: Tested in accordance with the applicable sections of:  
LM-79-08, LM-78-07, LM-58-13, ANSI\_ANSLG C78.377-2015,  
ANSI C82-77-10:2014, TM-30-15

Significance: The laboratory has not participated in the selection of samples to be tested.  
All testing is performed on the understanding that the significance of the report  
is limited to the extent that the test sample is representative of production units.

Notes: The measurements and other derived quantities contained in this report  
are based on the absolute data as measured.

Prorating the performance of the sample for the use of other component  
combinations (such as lamp / LED / Ballast / driver), or for use in different  
environmental conditions than that tested, may produce erroneous results.

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